

WHAT IS CLAIMED IS:

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1. A fastener insert formed from a nitrogen strengthened stainless steel alloy comprising:

- a) from about 0.05 to .15% carbon;
 - b) from about 5.0 to 12.0% manganese;
 - c) from about 2.0 to 6.0% silicon;
 - d) from about 12.0 to 20.0% chromium;
 - e) from about 6.0 to 12.0% nickel;
 - f) from about 0.02 to 0.8% nitrogen;
- with the remainder being iron.

2. The fastener insert of Claim 1 wherein said insert is in the form of a helically coiled wire.

3. The fastener insert of Claim 2 wherein said helically coiled wire has a substantially diamond shaped cross section.

3. The fastener insert of Claim 2 wherein said helically coiled wire has about a 60° internal screw thread convolution.

4. The fastener insert of Claim 1 wherein said helically coiled wire includes a selectively removable tang.

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6. A helically coiled screw thread insert for receiving a threaded fastener, said insert being formed from an alloy comprising:

a nitrogen strengthened stainless steel alloy. The stainless steel alloy preferably will include a positive amount up to a total of about 0.8% nitrogen. More particularly, the present invention relates to a nitrogen strengthened stainless steel insert formed from an alloy comprising: a) from about 0.05 to 0.15% carbon; b) from about 5.0 to 12.0% manganese; c) from about 2.0 to 6.0% silicon; d) from about 12.0 to 20.0% chromium; e) from about 6.0 to 12.0% nickel; f) from about 0.02 to 0.8% nitrogen; with the remainder being iron.

7. The fastener insert of Claim 6 wherein said helically coiled wire has a substantially diamond shaped cross section.

6. The fastener insert of Claim 5 wherein said helically coiled wire has a bout a 60° internal screw thread convolution.

7. The fastener insert of Claim 5 wherein said helically coiled wire includes a selectively removable tang.

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10. A helically coiled screw thread insert for receiving a threaded fastener, said insert being formed from an alloy comprising:

a) from about 0.08 to 0.1% carbon; b) from about 7.0 to 9.0% manganese; c) from about 3.5 to 4.5% silicon; d) from about 16.0 to 18.0% chromium; e) from about 8.0 to 9.0% nickel; f) from about 0.08 to 0.18% nitrogen; with the remainder being iron.

11. The fastener insert of Claim 10 wherein said helically coiled wire has a substantially diamond shaped cross section.

12. The fastener insert of Claim 10 wherein said helically coiled wire has a bout a 60° internal screw thread convolution.

13. The fastener insert of Claim 10 wherein said helically coiled wire includes a selectively removable tang.

14. A nut assembly for use in association with a threaded fastener comprising:

a nut having an internal screw thread barrel; and

a fastener insert disposed within said barrel which is formed from a metal alloy which is resistant to galling.

15. The nut assembly of Claim 14 wherein the fastener insert is formed from a nitrogen strengthened stainless steel alloy comprising:

- a) from about 0.05 to .15% carbon;
 - b) from about 5.0 to 12.0% manganese;
 - c) from about 2.0 to 6.0% silicon;
 - d) from about 12.0 to 20.0% chromium;
 - e) from about 6.0 to 12.0% nickel;
 - f) from about 0.02 to 0.8% nitrogen;
- with the remainder being iron.

16. The nut assembly of Claim 14 wherein said fastener insert is a helically coiled wire.

17. The nut assembly of Claim 16 wherein said fastener insert has a substantially diamond shaped cross section.

18. The nut assembly of Claim 16 wherein said fastener insert has about a 60° internal screw thread convolution.

19. The nut assembly of Claim 16 wherein said fastener insert includes a selectively removable tang.